

ATTORNEY DOCKEY, A.O.
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PATENT APPLICATION 1-4-04
09/548,466

12-30-03

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**In The United States Patent and Trademark Office
On Appeal From The Examiner To The Board
of Patent Appeals and Interferences**

In re Application of: Mukesh Dalal et al.

Serial No.: 09/548,466

Filing Date: April 13, 2000

Examiner: Pedro R. Kanof

Group Art Unit: 3628

Title: *System and Method For Multi-Enterprise Optimization Using
Flexible Trade Contracts*

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GROUP 3600

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Willie Jiles

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Appeal Brief

Appellants have appealed to the Board of Patent Appeals and Interferences from the decision of the Examiner mailed September 16, 2003, finally rejecting all Claims. Appellants are filing a Notice of Appeal with this Brief. Appellants respectfully submit this Appeal Brief in triplicate with the statutory fee of \$320.00.

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Real Party In Interest

This Application is currently owned by i2 Technologies US, Inc., as indicated by an Assignment recorded on July 30, 2001 in the Assignment Records of the United States Patent and Trademark Office at Reel 012033, Frames 0484-0496.

Related Appeals and Interferences

There are no known appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision regarding this Appeal.

Status of Claims

Claims 1-94 are pending in this Application, stand rejected pursuant to a final Office Action mailed July 30, 2003, and are all presented for appeal. All pending claims are shown in Appendix A.

Status of Amendments

All amendments submitted by Appellants have been entered by the Examiner, including all amendments submitted by Appellants in response to the final Office Action mailed July 30, 2003.

Summary of Invention

In particular embodiments of the present invention, one or more buyer computers communicate with one or more seller computers to collaborate in negotiating supply by the sellers and procurement by the buyers of products, services, or other tangible or intangible items offered by the sellers. (Page 6, Lines 5-8). The buyer computers and seller computers cooperate to attempt to optimize one or more supply chain or other suitable activities between the buyers and sellers. (Page 6, Lines 8-11). Through an interactive negotiation process and contractual monitoring system, mismatches between a buyer's demand and a seller's supply may be reduced or eliminated to increase the profitability of each enterprise. (Page 6, Lines 11-13).

In particular embodiments, a buyer computer may include a procurement manager to assist the buyer computer in negotiating and executing flexible trade contracts with

appropriate seller computers. (Page 6, Lines 30-32). A seller computer may include a supply manager to assist a seller computer in negotiating and executing flexible trade contracts with appropriate buyer computers. (Page 6, Line 32, through Page 7, Line 3).

Particular embodiments facilitate collaborative negotiations between one or more buyer computers and one or more seller computers to result in one or more flexible trade contracts for the supply of particular items to buyers utilizing system. (Page 7, Lines 29-31). Either a buyer computer or a seller computer may initiate a negotiation by transmitting proposed contract terms to the other. (Page 7, Line 31, through Page 8, Line 1). The buyer computer and the seller computer may then negotiate the terms of the flexible trade contracts. (Page 8, Lines 1-2).

Each flexible trade contract may include one or more forward contracts, one or more option contracts, and one or more flexible forward contracts, singly or in any suitable combination. (Page 8, Lines 2-4). The use of unit flexible trade contracts may provide one or more advantages in on-line negotiations between the buyer computer and the seller computer. (Page 9, Lines 19-20). For example, the use of unit flexible trade contracts allows for relatively easy pricing of the products involved in the contracts. (Page 9, Lines 20-22). Each type of unit flexible trade contract may be priced, and then multiple contracts of the same type may be generated. (Page 9, Lines 22-23). The final contractual price for the items is determined by summing the prices in the unit flexible trade contracts. (Page 9, Lines 23-25). Also, the use of flexible trade contracts provides flexibility in negotiations between the buyer and seller computers. (Page 9, Lines 25-26). Particular embodiments can deal with fixed demands for items using forward contracts and with ranges of potential demands using option or flexible forward contracts. (Page 9, Lines 26-28). Further, unit flexible trade contracts may be used to build any suitable type of complex contract. (Page 9, Lines 28-29).

In particular embodiments, once the terms of the proposed contracts have been negotiated, the contracts may be executed. (Page 10, Lines 7-8). The terms of the executed contracts may be stored at the buyer computer and the seller computer. (Page 10, Lines 8-9). Storing the contract terms facilitates monitoring each party's progress in fulfilling its contractual obligations. (Page 10, Lines 9-10). In addition, particular embodiments can

enforce the terms of the contracts by, for example, prohibiting the buyer computer from exercising an option in a manner inconsistent with the contract's terms or by assessing penalties for violation of the contract's terms. (Page 10, Lines 10-13).

Statement of Issues

1. Are Claims 63-92 directed to statutory subject matter under 35 U.S.C. § 101?
2. Are Claims 1-2, 5-7, 11, 15-16, 19-21, 25, 29-30, 35-37, 45-46, 49-51, 55-56, 58, 63-64, 67-69, 73-74, 78-79, 82-84, 88-89, and 91-92 patentable over European Patent Application EP0770967A2 by Schmidt et al. ("*Schmidt*") in view of U.S. Patent No. 5,754,938 to Herz et al. ("*Herz*") under 35 U.S.C. §103(a)?
3. Are Claims 3-4, 8-10, 12-14, 17-18, 22-24, 26-28, 31-34, 38-44, 47-48, 52-54, 57, 59-62, 66, 70-72, 75-77, 80-81, 85-87, 90, and 92-94 patentable over *Schmidt* in view of *Herz* and in further view of U.S. Patent No. 5,970,479 to Shepherd ("*Shepherd*") under 35 U.S.C. §103(a)?

Grouping of Claims

Appellants have made an effort to group claims to reduce the burden on the Board. In the Argument section of this Appeal Brief, where appropriate, Appellants present reasons why particular claims subject to a ground of rejection are separately patentable from other claims subject to the same ground of rejection.

Appellants have concluded that the claims may be grouped together as follows:

1. Group 1 may include Claims 1-14, 29-44, 59, 61, 63-77, and 93;
2. Group 2 may include Claims 15-28, 45-58, 60, 62, and 78-92; and
3. Group 3 may include Claim 94.

Argument

The rejection of Claims 63-92 under 35 U.S.C. § 101 as being directed to nonstatutory subject matter is improper and should be reversed by the Board. The rejection of Claims 1-2, 5-7, 11, 15-16, 19-21, 25, 29-30, 35-37, 45-46, 49-51, 55-56, 58, 63-64, 67-69, 73-74, 78-79,

82-84, 88-89, and 91-92 under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz* is improper and should be reversed by the Board. The rejection of Claims 3-4, 8-10, 12-14, 17-18, 22-24, 26-28, 31-34, 38-44, 47-48, 52-54, 57, 59-62, 66, 70-72, 75-77, 80-81, 85-87, 90, and 92-94 under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz* and in further view of *Shepherd* is improper and should be reversed by the Board.

I. Claims 63-92 are Directed to Statutory Subject Matter

Claims 63-92 stand rejected under 35 U.S.C. §101 as being directed to nonstatutory subject matter. Appellants respectfully submit that this rejection is improper and should be reversed by the Board.

Under 35 U.S.C. § 101, “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101 (2002). With respect to claims directed to software, the M.P.E.P. states that “a claimed computer-readable medium encoded with a computer program . . . is . . . statutory.” M.P.E.P. ch. 2106(IV)(B)(1)(a) (Rev. 1, Feb. 2003).

Independent Claims 63 and 78 are directed to “software embodied in computer-readable media and when executed by [a buyer or seller] computer system operable to” provide certain recited functionality. Dependent Claims 64-77 are directed to the “software of Claim 63,” and dependent Claims 79-92 are directed to the “software of Claim 78.” For at least these reasons, Appellants respectfully submit that Claims 63-92 are clearly directed to statutory subject matter under 35 U.S.C. § 101.

II. Claims 1-94 are Patentable over the Proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* Combinations

A. Overview

Claims 1-2, 5-7, 11, 15-16, 19-21, 25, 29-30, 35-37, 45-46, 49-51, 55-56, 58, 63-64, 67-69, 73-74, 78-79, 82-84, 88-89, and 91-92 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz*. A copy of *Schmidt* is provided in Appendix B, and a copy of *Herz* is provided in Appendix C. Appellants respectfully submit that, even assuming for the sake of argument that *Schmidt* and *Herz* could be properly combined with each other as proposed, the proposed *Schmidt-Herz* combination would still fail to disclose, teach, or suggest limitations recited in Appellants' Claims. Appellants respectfully submit that this rejection is improper and should be reversed by the Board.

Claims 3-4, 8-10, 12-14, 17-18, 22-24, 26-28, 31-34, 38-44, 47-48, 52-54, 57, 59-62, 66, 70-72, 75-77, 80-81, 85-87, 90, and 92-94 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz* and in further view of *Shepherd*. A copy of *Shepherd* is provided in Appendix D. Appellants respectfully submit that, even assuming for the sake of argument that *Schmidt*, *Herz*, and *Shepherd* could be properly combined with each other as proposed, the proposed *Schmidt-Herz-Shepherd* combination would still fail to disclose, teach, or suggest limitations recited in Appellants' claims. Appellants respectfully submit that this rejection is improper and should be reversed by the Board.

B. Standard

A rejection under 35 U.S.C. § 103(a) is proper only if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter *as a whole* would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (emphasis added). According to the M.P.E.P., the "fact that references can be combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination" or modification. M.P.E.P. ch. 2143.01 (Rev. 1 Feb. 2003) (emphasis in original). The fact that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed combination or modification is also insufficient to establish obviousness. *See In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

Furthermore, "a showing of a suggestion, teaching, or motivation to combine [or modify] . . . prior art references is an essential component of an obviousness holding." *In re*

Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000)). According to the Federal Circuit, “Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine [or modify] prior art references.” *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999). 35 U.S.C. § 103(a) forbids “entry into the tempting but forbidden zone of hindsight when analyzing the patentability of claims pursuant to that section.” *Dembiczak* at 998-99; *see also In re Fine* 837 F.2d at 1075 (“One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”).

In addition, the M.P.E.P. states, “Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge [that was] generally available to one of ordinary skill in the art” at the time of the invention. M.P.E.P. ch. 2143.01 (Rev. 1 Feb. 2003). “Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved.” *Dembiczak* at 999. However, the “range of sources available . . . does not diminish the requirement for actual evidence.” *Id.*; *see also In Re Jones*, 958 F.2d 347 (“Conspicuously missing from this record is any evidence, other than the PTO’s speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at” the claimed invention.).

C. Schmidt

Schmidt merely discloses a vendor-managed replenishment (VMR) contract being manually proposed, studied, and negotiated before the initiation of a potential VMR program. (Page 30, Lines 19-41). After the VMR contract is executed, a set of decision-support tools provides an initial set of replenishment quantities for user approval and conversion into purchase orders. (Page 29, Lines 7-8; Page 30, Lines 41-44).

D. Herz

Herz merely discloses a system that monitors stock prices and, when certain stock-performance characteristics are met, automatically places a buy or sell order. (Column 61, Lines 35-39).

E. Shepherd

Shepherd merely discloses a system that automatically secures agreement on the part of the stakeholders of an options contract seeking to trade the options contract and electronically transfers resources between contracting parties' accounts. (Column 49, Lines 27-37).

F. Group 1 (Claims 1-14, 29-44, 59, 61, 63-77, and 93)

Claims 1-2, 5-7, 11, 29-30, 35-37, 63-64, 67-69, and 73-74 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz*. Claims 3-4, 8-10, 12-14, 31-34, 38-44, 59-61, 66, 70-72, 75-77, and 93 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz* and in further view of *Shepherd*. Appellants respectfully submit that these claims are clearly patentable over the proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* combinations.

Claims 1-14, 29-44, 59, 61, 63-77, and 93 are separately patentable from every other claim subject to the same ground of rejection. These claims recite limitations that are substantially different from limitations recited in other claims. In addition, claims excluded from Group 1 that are subject to the same ground of rejection and that depend on independent Claims 1, 29, and 63, respectively, recite patentable distinctions over the prior art beyond those recited in independent Claims 1, 29, and 63 and cannot be properly grouped with independent Claims 1, 29, and 63 for purposes of this Appeal.

Independent Claim 1 of the present Application recites:

A method of multi-enterprise optimization at a buyer computer system, comprising:
accessing a forecasted demand for at least one item;

automatically and without user input subsequent to accessing the forecasted demand, generating one or more proposed flexible trade contracts using the forecasted demand for the item;

automatically and without user input subsequent to generating the proposed flexible trade contracts, communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;

automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the modification to determine whether the modification is acceptable;

automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, accepting the modification if the modification is acceptable; and

subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

Independent Claims 29, 63, and 93 recite substantially similar limitations. Neither the proposed *Schmidt-Herz* combination nor the proposed *Schmidt-Herz-Shepherd* combination discloses, teaches, or suggests the particular combinations of limitations specifically recited in these claims.

For example, the Examiner has acknowledged that *Schmidt* fails to disclose, teach, or suggest an ***automatic collaborative negotiation*** between a buyer computer system and a seller computer system that involves certain steps being carried out ***automatically and without user input***, as recited in independent Claim 1. (July 30, 2003 Office Action, Page 4). In addition, despite the Examiner's assertions to the contrary, *Schmidt* also fails to disclose, teach, or suggest specific steps carried out during the automatic collaborative negotiation, as recited in independent Claim 1. Even assuming for the sake of argument that a VMR contract or a purchase order in *Schmidt* could properly be considered a proposed flexible

trade contract, *Schmidt* would still fail to disclose, teach, or suggest any details of the negotiation of the VMR contract or any negotiation over the purchase order. Therefore, *Schmidt* necessarily fails to disclose, teach, or suggest, as recited in independent Claim 1:

- *communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;*
- *receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;*
- *evaluating the modification to determine whether the modification is acceptable;*
and
- *accepting the modification if the modification is acceptable.*

The Examiner relies on *Herz* to make up for some of these deficiencies of *Schmidt*. However, *Herz* fails to make up for any of these deficiencies. As discussed above, *Herz* merely discloses a system that monitors stock prices and, when certain stock-performance characteristics are met, automatically places a buy or sell order. Nowhere does *Herz* disclose, teach, or suggest that the buy or sell order is in anyway negotiated. Therefore, even assuming for the sake of argument that a buy or sell order in *Herz* could properly be considered a proposed flexible trade contract, *Herz* would still fail to disclose, teach, or suggest ***automatic collaborative negotiation*** over the buy or sell order, as recited in independent Claim 1. Moreover, because *Herz* does not disclose, teach, or suggest any negotiation over the buy or sell order, *Herz* also necessarily fails to disclose, teach, or suggest the specific steps listed above that are carried out during the automatic collaborative negotiation, as recited in independent Claim 1.

Shepherd also fails to make up for any of these deficiencies of *Schmidt*. As an example, even assuming that the options contract in *Shepherd* could properly be considered a proposed flexible trade contract, nowhere does *Shepherd* disclose, teach, or suggest any negotiation over the options contract, much less an ***automatic collaborative negotiation*** over the options contract between a buyer computer system and a seller computer system, as recited in independent Claim 1. In addition, because *Shepherd* does not disclose, teach, or suggest any negotiation over the options contract, *Shepherd* also necessarily fails to disclose,

teach, or suggest the specific steps listed above that are carried out during the automatic collaborative negotiation, as recited in independent Claim 1.

For at least these reasons, the proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* combinations fail to disclose, teach, or suggest the particular combination of limitations specifically recited in independent Claims 1, 29, 63, and 93. Independent Claims 1, 29, 63, and 93 and their dependent claims are therefore patentable over the proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* combinations. Appellants respectfully submit that these rejections are improper and should be reversed by the Board.

G. Group 2 (Claims 15-28, 45-58, 60, 62, and 78-92)

Claims 15-16, 19-21, 25, 45-46, 49-51, 55-56, 58, 78-79, 82-84, 88-89, and 91-92 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz*. Claims 17-18, 22-24, 26-28, 47-48, 52-54, 57, 60, 62, 80-81, 85-87, 90, and 92 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz* and in further view of *Shepherd*. Appellants respectfully submit that these claims are clearly patentable over the proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* combinations.

Claims 15-28, 45-58, 60, 62, and 78-92 are separately patentable from every other claim subject to the same ground of rejection. These claims recite limitations that are substantially different from limitations recited in other claims. In addition, claims excluded from Group 2 that are subject to the same ground of rejection and that depend on independent Claims 15, 45, and 78, respectively, recite patentable distinctions over the prior art beyond those recited in independent Claims 15, 45, and 78 and cannot be properly grouped with independent Claims 15, 45, and 78 for purposes of this Appeal.

Independent Claim 15 of the present Application recites:

A method of multi-enterprise optimization at a seller computer system, comprising:

receiving, as part of an automatic collaborative negotiation, one or more proposed flexible trade contracts from a buyer computer system for

automatic evaluation and possible acceptance, each proposed flexible trade contract reflecting a buyer's forecasted demand for at least one item;

automatically and without user input subsequent to receiving a proposed flexible trade contract from the buyer computer system, as part of the automatic collaborative negotiation, evaluating the proposed flexible trade contract to determine whether the proposed flexible trade contract is acceptable;

automatically and without user input subsequent to evaluating the proposed flexible trade contract, as part of the automatic collaborative negotiation:

if the proposed flexible trade contract is acceptable, accepting the proposed flexible trade contract; and

if the proposed flexible trade contract is not acceptable, generating at least one modification of the proposed flexible trade contract and communicating the modification to the buyer computer system for automatic evaluation and possible acceptance; and subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

Independent Claims 45 and 78 recite substantially similar limitations. Neither the proposed *Schmidt-Herz* combination nor the proposed *Schmidt-Herz-Shepherd* combination discloses, teaches, or suggests the particular combinations of limitations specifically recited in these claims.

For example, the Examiner has acknowledged that *Schmidt* fails to disclose, teach, or suggest an ***automatic collaborative negotiation*** between a buyer computer system and a seller computer system that involves certain steps being carried out ***automatically and without user input***, as recited in independent Claim 15. (July 30, 2003 Office Action, Page 4). In addition, despite the Examiner's assertions to the contrary, *Schmidt* also fails to disclose, teach, or suggest specific steps carried out during the automatic collaborative negotiation, as recited in independent Claim 15. Even assuming for the sake of argument that a VMR contract or a purchase order in *Schmidt* could properly be considered a proposed flexible trade contract, *Schmidt* would still fail to disclose, teach, or suggest any details of the negotiation of the VMR contract or any negotiation over the purchase order. Therefore, *Schmidt* necessarily fails to disclose, teach, or suggest, as recited in independent Claim 15:

- ***evaluating a proposed flexible trade contract to determine whether the proposed flexible trade contract is acceptable;***

- *if the proposed flexible trade contract is acceptable, accepting the proposed flexible trade contract; and*
- *if the proposed flexible trade contract is not acceptable, generating at least one modification of the proposed flexible trade contract and communicating the modification to a buyer computer system for automatic evaluation and possible acceptance.*

For at least the same reasons discussed above with respect to independent Claim 1, neither *Herz* nor *Shepherd* makes up for any of these deficiencies of *Schmidt*.

For at least these reasons, the proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* combinations fail to disclose, teach, or suggest the particular combination of limitations specifically recited in independent Claims 15, 45, and 78. Independent Claims 15, 45, and 78 and their dependent claims are therefore patentable over the proposed *Schmidt-Herz* and *Schmidt-Herz-Shepherd* combinations. Appellants respectfully submit that these rejections are improper and should be reversed by the Board.

H. Group 3 (Claim 94)

Claim 94 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Schmidt* in view of *Herz* and in further view of *Shepherd*. Appellants respectfully submit that Claim 94 is clearly patentable over the proposed *Schmidt-Herz-Shepherd* combination.

Claim 94 is separately patentable from every other claim subject to the same ground of rejection. This claim recite limitations that are substantially different from limitations recited in other claims.

Independent Claim 94 of the present Application recites:

A method of multi-enterprise optimization at a buyer computer system, comprising:
 accessing a forecasted demand for at least one item;
 automatically and without user input subsequent to accessing the forecasted demand, generating one or more proposed flexible trade contracts using the forecasted demand for the item;
 automatically and without user input subsequent to generating the proposed flexible trade contracts, communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative

negotiation over the proposed flexible trade contract with the seller computer system;

automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the modification to determine whether the first modification is acceptable;

automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, generating a first counter-modification to the modification if the modification is not acceptable;

automatically and without user input subsequent to generating the first counter-modification to the modification, as part of the automatic collaborative negotiation, communicating the first counter-modification to the seller computer system for automatic evaluation and possible acceptance;

automatically and without user input subsequent to communicating the first counter-modification, as part of the automatic collaborative negotiation, receiving at least one second counter-modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the first counter-modification;

automatically and without user input subsequent to receiving the second counter-modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the second counter-modification to determine whether the second counter-modification is acceptable;

as part of the automatic collaborative negotiation, communicating with the seller computer system in a series of rounds in which the buyer computer system and the seller computer system successively propose one or more further counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create a flexible trade contract based on the proposed flexible trade contract; and

subsequent to execution of the flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

The proposed *Schmidt-Herz-Shepherd* combination fails to disclose, teach, or suggest the particular combinations of limitations specifically recited in Claim 94.

For example, the Examiner has acknowledged that *Schmidt* fails to disclose, teach, or suggest an *automatic collaborative negotiation* between a buyer computer system and a seller computer system that involves certain steps being carried out *automatically and without user input*, as recited in independent Claim 94. (July 30, 2003 Office Action, Pages 4 and 17). In addition, despite the Examiner's assertions to the contrary, *Schmidt* also fails to disclose, teach, or suggest specific steps carried out during the automatic collaborative negotiation, as recited in independent Claim 94. Even assuming for the sake of argument that a VMR contract or a purchase order in *Schmidt* could properly be considered a proposed flexible trade contract, *Schmidt* would still fail to disclose, teach, or suggest any details of the negotiation of the VMR contract or any negotiation over the purchase order. Therefore, *Schmidt* necessarily fails to disclose, teach, or suggest, as recited in independent Claim 94:

- *communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;*
- *receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;*
- *evaluating the modification to determine whether the modification is acceptable;*
- *generating a first counter-modification to the modification if the modification is not acceptable;*
- *communicating the first counter-modification to the seller computer system for automatic evaluation and possible acceptance;*
- *receiving at least one second counter-modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the first counter-modification;*
- *evaluating the second counter-modification to determine whether the second counter-modification is acceptable; and*
- *communicating with the seller computer system in a series of rounds in which the buyer computer system and the seller computer system successively propose one or more further counter-modifications of the proposed flexible trade contract for*

automatic evaluation and possible acceptance to create a flexible trade contract based on the proposed flexible trade contract.

For at least the same reasons discussed above with respect to independent Claim 1, neither *Herz* nor *Shepherd* makes up for any of these deficiencies of *Schmidt*.

For at least these reasons, the proposed *Schmidt-Herz-Shepherd* combination fails to disclose, teach, or suggest the particular combination of limitations specifically recited in independent Claim 94. Independent Claim 94 is therefore patentable over the proposed *Schmidt-Herz-Shepherd* combination. Appellants respectfully submit that these rejections are improper and should be reversed by the Board.

Conclusion

Appellants have demonstrated that the present invention, as claimed, is clearly distinguishable over the prior art cited by the Examiner. Therefore, Appellants respectfully request the Board of Patent Appeals and Interferences to reverse the final rejection of the Examiner and instruct the Examiner to issue a Notice of Allowance with respect to all pending claims.

Appellants have enclosed a check in the amount of \$330.00 for this Appeal Brief. Appellants believe no additional fees are due. However, the Commissioner is hereby authorized to charge any additional fees and credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Appellants



Christopher W. Kennerly
Reg. No. 40,675

Date: December 29, 2003

Correspondence Address:

Customer Number: **05073**

Appendix A

1. A method of multi-enterprise optimization at a buyer computer system, comprising:

accessing a forecasted demand for at least one item;

automatically and without user input subsequent to accessing the forecasted demand, generating one or more proposed flexible trade contracts using the forecasted demand for the item;

automatically and without user input subsequent to generating the proposed flexible trade contracts, communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;

automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the modification to determine whether the modification is acceptable;

automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, accepting the modification if the modification is acceptable; and

subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

2. The method of Claim 1, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

3. The method of Claim 2, wherein each forward contract comprises a quantity of the item that a buyer is obligated to purchase and a seller is obligated to supply.

4. The method of Claim 3, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

5. The method of Claim 2, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:

- a maximum quantity of the item that a seller is obligated to supply;
- a maximum number of item types that the seller is obligated to supply; and
- a maximum number of locations where the item must be provided.

6. The method of Claim 5, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

7. The method of Claim 5, wherein each option contract comprises an exercise period after the execution of the option contract during which a buyer must exercise the option.

8. The method of Claim 2, wherein each flexible forward contract comprises:

a total quantity of one or more items that a buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

9. The method of Claim 8, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

10. The method of Claim 8, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

11. The method of Claim 1, comprising:

receiving an alternate contract term from the seller computer system for automatic evaluation and possible acceptance;

automatically and without user input subsequent to receiving the alternate contract term from the seller computer system, accepting the alternate contract term without user input if the alternate contract term falls within a range of acceptable contract terms; and

automatically and without user input subsequent to receiving the alternate contract term from the seller computer system, identifying the alternate contract term as requiring user input if the alternate contract term falls outside the range of acceptable contract terms.

12. The method of Claim 1, further comprising:

updating the forecasted demand for the item; and

automatically and without user input subsequent to updating the forecasted demand for the item, exercising an option in the flexible trade contract based on the updated forecasted demand.

13. The method of Claim 1, further comprising, automatically and without user input subsequent to execution of the flexible trade contract, calculating a penalty if a seller fails to comply with a term of the flexible trade contract.

14. The method of Claim 1, wherein communicating each proposed flexible trade contract to the seller computer system comprises communicating each proposed flexible trade contract to the seller computer system through an intermediary.

15. A method of multi-enterprise optimization at a seller computer system, comprising:

receiving, as part of an automatic collaborative negotiation, one or more proposed flexible trade contracts from a buyer computer system for automatic evaluation and possible acceptance, each proposed flexible trade contract reflecting a buyer's forecasted demand for at least one item;

automatically and without user input subsequent to receiving a proposed flexible trade contract from the buyer computer system, as part of the automatic collaborative negotiation, evaluating the proposed flexible trade contract to determine whether the proposed flexible trade contract is acceptable;

automatically and without user input subsequent to evaluating the proposed flexible trade contract, as part of the automatic collaborative negotiation:

if the proposed flexible trade contract is acceptable, accepting the proposed flexible trade contract; and

if the proposed flexible trade contract is not acceptable, generating at least one modification of the proposed flexible trade contract and communicating the modification to the buyer computer system for automatic evaluation and possible acceptance; and subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

16. The method of Claim 15, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

17. The method of Claim 16, wherein each forward contract comprises a quantity of the item that the buyer is obligated to purchase and a seller is obligated to supply.

18. The method of Claim 17, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

19. The method of Claim 16, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:

- a maximum quantity of the item that a seller is obligated to supply;
- a maximum number of item types that the seller is obligated to supply; and
- a maximum number of locations where the item must be provided.

20. The method of Claim 19, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

21. The method of Claim 19, wherein each option contract comprises an exercise period after the execution of the option contract during which the buyer must exercise the option.

22. The method of Claim 16, wherein each flexible forward contract comprises:
a total quantity of one or more items that the buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

23. The method of Claim 22, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

24. The method of Claim 22, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

25. The method of Claim 15, comprising:
automatically and without user input subsequent to evaluating the proposed flexible trade contract, generating an alternate contract term; and
automatically and without user input subsequent to generating the alternate contract term, communicating the alternate contract term to the buyer computer system for automatic evaluation and possible acceptance.

26. The method of Claim 15, further comprising:
receiving a request from the buyer computer system to exercise an option in the flexible trade contract; and
automatically and without user input subsequent to receiving the request from the buyer computer system, accepting the buyer's request if the buyer computer system submitted the request within an exercise period and the request does not exceed a term of the flexible trade contract.

27. The method of Claim 15, further comprising, automatically and without user input subsequent to execution of the flexible trade contract, calculating a penalty if the buyer fails to comply with a term of the flexible trade contract.

28. The method of Claim 15, wherein receiving one or more proposed flexible trade contracts from the buyer computer system comprises receiving one or more proposed flexible trade contracts from the buyer computer system through an intermediary.

29. A procurement manager for multi-enterprise optimization, comprising:
a negotiation module operable to:

receive a forecasted demand for at least one item;

automatically and without user input subsequent to receiving the forecasted demand, generate one or more proposed flexible trade contracts using the forecasted demand for the item;

automatically and without user input subsequent to generating the proposed flexible trade contracts, communicate each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;

automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receive at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluate the modification to determine whether the modification is acceptable; and

automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, accept the modification if the modification is acceptable;
and

an execution module operable to execute a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation to enable one or more actions to be taken to perform under the executed flexible trade contract.

30. The procurement manager of Claim 29, wherein the negotiation module receives the forecasted demand from a user.

31. The procurement manager of Claim 29, further comprising a forecast module operable to determine the forecasted demand.

32. The procurement manager of Claim 29, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

33. The procurement manager of Claim 32, wherein each forward contract comprises a quantity of the item that a buyer is obligated to purchase and a seller is obligated to supply.

34. The procurement manager of Claim 33, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

35. The procurement manager of Claim 32, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:

- a maximum quantity of the item that a seller is obligated to supply;
- a maximum number of item types that the seller is obligated to supply; and
- a maximum number of locations where the item must be provided.

36. The procurement manager of Claim 35, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

37. The procurement manager of Claim 35, wherein each option contract comprises an exercise period after the execution of the option contract during which a buyer must exercise the option.

38. The procurement manager of Claim 32, wherein each flexible forward contract comprises:

a total quantity of one or more items that a buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

a range of quantities for one item;

a range of quantities for one item type; and

a range of quantities for one location where the item must be provided.

39. The procurement manager of Claim 38, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

a range of zero to one unit for the item;

a range of zero to one unit for the item type; and

a range of zero to one unit for the location.

40. The procurement manager of Claim 38, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

41. The procurement manager of Claim 29, wherein the negotiation module is operable to:

receive an alternate contract term from the seller computer system for automatic evaluation and possible acceptance;

automatically and without user input subsequent to receiving the alternate contract term from the seller computer system, accept the alternate contract term without user input if the alternate contract term falls within a range of acceptable contract terms; and

automatically and without user input subsequent to receiving the alternate contract term from the seller computer system, identify the alternate contract term as requiring user input if the alternate contract term falls outside the range of acceptable contract terms.

42. The procurement manager of Claim 29, further comprising an exercise module operable to:

receive an updated forecasted demand for the item; and

automatically and without user input subsequent to receiving the updated forecast demand for the item, exercise an option in the flexible trade contract based on the updated forecasted demand.

43. The procurement manager of Claim 29, further comprising a tracking module operable to, automatically and without user input subsequent to execution of the flexible trade contract, calculate a penalty if a seller fails to comply with a term of the flexible trade contract.

44. The procurement manager of Claim 29, wherein the negotiation module is operable to communicate the proposed flexible trade contract to the seller computer system through an intermediary.

45. A supply manager for multi-enterprise optimization, comprising:
a negotiation module operable to:

receive, as part of an automatic collaborative negotiation, one or more proposed flexible trade contracts from a buyer computer system for automatic evaluation and possible acceptance, each proposed flexible trade contract reflecting a buyer's forecasted demand for at least one item;

automatically and without user input subsequent to receiving a proposed flexible trade contract from the buyer computer system, as part of the automatic collaborative negotiation, evaluate the proposed flexible trade contract to determine whether the proposed flexible trade contract is acceptable;

automatically and without user input subsequent to evaluating the proposed flexible trade contract, as part of the automatic collaborative negotiation:

if the proposed flexible trade contract is acceptable, accept the proposed flexible trade contract; and

if the proposed flexible trade contract is not acceptable, generate at least one modification of the proposed flexible trade contract and communicate the modification to the buyer computer system for automatic evaluation and possible acceptance; and

an execution module operable to execute a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation to enable one or more actions to be taken to perform under the executed flexible trade contract.

46. The supply manager of Claim 45, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

47. The supply manager of Claim 46, wherein each forward contract comprises a quantity of the item that the buyer is obligated to purchase and a seller is obligated to supply.

48. The supply manager of Claim 47, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

49. The supply manager of Claim 46, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:

- a maximum quantity of the item that a seller is obligated to supply;
- a maximum number of item types that the seller is obligated to supply; and
- a maximum number of locations where the item must be provided.

50. The supply manager of Claim 49, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

51. The supply manager of Claim 49, wherein each option contract comprises an exercise period after the execution of the option contract during which the buyer must exercise the option.

52. The supply manager of Claim 46, wherein each flexible forward contract comprises:

- a total quantity of one or more items that the buyer is obligated to purchase and a seller is obligated to supply; and

- a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

53. The supply manager of Claim 52, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

54. The supply manager of Claim 52, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

55. The supply manager of Claim 45, wherein the negotiation module is further operable to:

automatically and without user input subsequent to evaluating the proposed flexible trade contract, generate an alternate contract term; and

automatically and without user input subsequent to generating the alternate contract term, communicate the alternate contract term to the buyer computer system for automatic evaluation and possible acceptance.

56. The supply manager of Claim 45, further comprising a tracking module operable to:

receive a request from the buyer computer system to exercise an option in the flexible trade contract; and

automatically and without user input subsequent to receiving the request from the buyer computer system, accept the buyer's request if the buyer computer system submitted the request within an exercise period and the request does not exceed a term of the flexible trade contract.

57. The supply manager of Claim 56, wherein the tracking module is further operable to, automatically and without user input subsequent to execution of the flexible trade contract, calculate a penalty if the buyer fails to comply with a term of the flexible trade contract.

58. The supply manager of Claim 45, wherein the negotiation module is operable to receive one or more proposed flexible trade contracts from the buyer computer system through an intermediary.

59. The method of Claim 1, further comprising, as part of the collaborative negotiation, communicating with the seller computer system in a series of rounds in which the buyer computer system and the seller computer system successively propose one or more counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create the flexible trade contract.

60. The method of Claim 15, further comprising, as part of the collaborative negotiation, communicating with the buyer computer system in a series of rounds in which the buyer computer system and the seller computer system successively propose one or more counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create the flexible trade contract

61. The procurement manager of Claim 29, wherein the negotiation module is operable, as part of the collaborative negotiation, to communicate with the seller computer system in a series of rounds in which the negotiation module and the seller computer system further successively propose one or more counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create the flexible trade contract.

62. The supply manager of Claim 45, wherein the negotiation module is operable, as part of the collaborative negotiation, to communicate with the buyer computer system in a series of rounds in which the negotiation module and the buyer computer system further successively propose one or more counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create the flexible trade contract.

63. Software for multi-enterprise optimization at a buyer computer system, the software embodied in computer-readable media and when executed by the computer system operable to:

- access a forecasted demand for at least one item;

- automatically and without user input subsequent to accessing the forecasted demand, generate one or more proposed flexible trade contracts using the forecasted demand for the item;

- automatically and without user input subsequent to generating the proposed flexible trade contracts, communicate each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;

- automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receive at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

- automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluate the modification to determine whether the modification is acceptable;

- automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, accept the modification if the modification is acceptable; and

- subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, take one or more actions to perform under the executed flexible trade contract.

64. The software of Claim 63, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

65. The software of Claim 64, wherein each forward contract comprises a quantity of the item that a buyer is obligated to purchase and a seller is obligated to supply.

66. The software of Claim 65, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

67. The software of Claim 64, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:

- a maximum quantity of the item that a seller is obligated to supply;
- a maximum number of item types that the seller is obligated to supply; and
- a maximum number of locations where the item must be provided.

68. The software of Claim 67, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

69. The software of Claim 67, wherein each option contract comprises an exercise period after the execution of the option contract during which a buyer must exercise the option.

70. The software of Claim 64, wherein each flexible forward contract comprises:
a total quantity of one or more items that a buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

71. The software of Claim 70, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

72. The software of Claim 70, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

73. The software of Claim 63, operable to:
receive an alternate contract term from the seller computer system for automatic evaluation and possible acceptance;

automatically and without user input subsequent to receiving the alternate contract term from the seller computer system, accept the alternate contract term without user input if the alternate contract term falls within a range of acceptable contract terms; and

automatically and without user input subsequent to receiving the alternate contract term from the seller computer system, identify the alternate contract term as requiring user input if the alternate contract term falls outside the range of acceptable contract terms.

74. The software of Claim 63, further operable to:
update the forecasted demand for the item; and
automatically and without user input subsequent to updating the forecasted demand for the item, exercise an option in the flexible trade contract based on the updated forecasted demand.

75. The software of Claim 63, further operable to, automatically and without user input subsequent to execution of the flexible trade contract, calculate a penalty if a seller fails to comply with a term of the flexible trade contract.

76. The software of Claim 63, wherein communicating each proposed flexible trade contract to the seller computer system comprises communicating each proposed flexible trade contract to the seller computer system through an intermediary.

77. The software of Claim 63, further operable, as part of the collaborative negotiation, to communicate with the seller computer system in a series of rounds in which the software and the seller computer system successively propose one or more modifications or counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create the flexible trade contract.

78. Software for multi-enterprise optimization at a seller computer system, the software embodied in computer-readable media and when executed by the computer system operable to:

receive, as part of an automatic collaborative negotiation, one or more proposed flexible trade contracts from a buyer computer system for automatic evaluation and possible acceptance, each proposed flexible trade contract reflecting a buyer's forecasted demand for at least one item;

automatically and without user input subsequent to receiving a proposed flexible trade contract from the buyer computer system, as part of the automatic collaborative negotiation, evaluate the proposed flexible trade contract to determine whether the proposed flexible trade contract is acceptable;

automatically and without user input subsequent to evaluating the proposed flexible trade contract, as part of the automatic collaborative negotiation:

if the proposed flexible trade contract is acceptable, accept the proposed flexible trade contract ; and

if the proposed flexible trade contract is not acceptable, generate at least one modification of the proposed flexible trade contract and communicating the modification to the buyer computer system for automatic evaluation and possible acceptance; and

subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, take one or more actions to perform under the executed flexible trade contract.

79. The software of Claim 78, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

80. The software of Claim 79, wherein each forward contract comprises a quantity of the item that the buyer is obligated to purchase and a seller is obligated to supply.

81. The software of Claim 80, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

82. The software of Claim 79, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:

- a maximum quantity of the item that a seller is obligated to supply;
- a maximum number of item types that the seller is obligated to supply; and
- a maximum number of locations where the item must be provided.

83. The software of Claim 82, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

84. The software of Claim 82, wherein each option contract comprises an exercise period after the execution of the option contract during which the buyer must exercise the option.

85. The software of Claim 79, wherein each flexible forward contract comprises:
a total quantity of one or more items that the buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

86. The software of Claim 85, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

87. The software of Claim 85, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

88. The software of Claim 78, operable to:
automatically and without user input subsequent to evaluating the proposed flexible trade contract, generate an alternate contract term; and
automatically and without user input subsequent to generating the alternate contract term, communicate the alternate contract term to the buyer computer system for automatic evaluation and possible acceptance.

89. The software of Claim 78, further operable to:
receive a request from the buyer computer system to exercise an option in the flexible trade contract; and
automatically and without user input subsequent to receiving the request from the buyer computer system, accept the buyer's request if the buyer computer system submitted the request within an exercise period and the request does not exceed a term of the flexible trade contract.

90. The software of Claim 78, further operable to, automatically and without user input subsequent to execution of the flexible trade contract, calculate a penalty if the buyer fails to comply with a term of the flexible trade contract.

91. The software of Claim 78, wherein receiving one or more proposed flexible trade contracts from the buyer computer system comprises receiving one or more proposed flexible trade contracts from the buyer computer system through an intermediary.

92. The software of Claim 79, wherein the software is further operable, as part of the collaborative system negotiation, to communicate with the buyer computer system in a series of rounds in which the software and the buyer computer system successively propose one or more modifications or counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create the flexible trade contract.

93. A system for multi-enterprise optimization at a buyer computer system, comprising:

means for accessing a forecasted demand for at least one item;

automatically and without user input subsequent to accessing the forecasted demand, generating one or more proposed flexible trade contracts using the forecasted demand for the item;

means for, automatically and without user input subsequent to generating the proposed flexible trade contracts, communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;

means for, automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

means for, automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the modification to determine whether the modification is acceptable;

means for, automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, accepting the modification if the modification is acceptable; and

means for, subsequent to execution of a flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

94. A method of multi-enterprise optimization at a buyer computer system, comprising:

accessing a forecasted demand for at least one item;

automatically and without user input subsequent to accessing the forecasted demand, generating one or more proposed flexible trade contracts using the forecasted demand for the item;

automatically and without user input subsequent to generating the proposed flexible trade contracts, communicating each proposed flexible trade contract to a seller computer system to initiate an automatic collaborative negotiation over the proposed flexible trade contract with the seller computer system;

automatically and without user input subsequent to communicating the proposed flexible trade contract, as part of the automatic collaborative negotiation, receiving at least one modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the proposed flexible trade contract;

automatically and without user input subsequent to receiving the modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the modification to determine whether the first modification is acceptable;

automatically and without user input subsequent to evaluating the modification of the proposed flexible trade contract, as part of the automatic collaborative negotiation, generating a first counter-modification to the modification if the modification is not acceptable;

automatically and without user input subsequent to generating the first counter-modification to the modification, as part of the automatic collaborative negotiation, communicating the first counter-modification to the seller computer system for automatic evaluation and possible acceptance;

automatically and without user input subsequent to communicating the first counter-modification, as part of the automatic collaborative negotiation, receiving at least one second counter-modification of the proposed flexible trade contract from the seller computer system for automatic evaluation and possible acceptance in response to communicating the first counter-modification;

automatically and without user input subsequent to receiving the second counter-modification of the proposed flexible trade contract from the seller computer system, as part of the automatic collaborative negotiation, evaluating the second counter-modification to determine whether the second counter-modification is acceptable;

as part of the automatic collaborative negotiation, communicating with the seller computer system in a series of rounds in which the buyer computer system and the seller computer system successively propose one or more further counter-modifications of the proposed flexible trade contract for automatic evaluation and possible acceptance to create a flexible trade contract based on the proposed flexible trade contract; and

subsequent to execution of the flexible trade contract created based on the proposed flexible trade contract as a result of the automatic collaborative negotiation, taking one or more actions to perform under the executed flexible trade contract.

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Appendix B